

Summary of Ground Water Quality Standards Rule and Significant Changes Since Preliminary Adoption

Summary of the Rule Process since Preliminary Adoption

Since preliminary adoption of the draft ground water quality standards rule in October 1999, IDEM has worked to revise the standards to add clarity and to address concerns raised in the comments received in response to the third notice of the rule published January 3, 2000 and the comments made to the Water Pollution Control Board at their July 12, 2000 meeting.

Issues with the standards have been a topic on each agenda of the eight meetings of the Ground Water Task Force held since preliminary adoption. The Ground Water Quality Standards workgroup met four times since preliminary adoption to openly discuss the proposed rule language. Additionally, two topic specific issue forums were held to talk about how ground water contamination prevention language should be included in the rule and, separately, how the standards may be implemented considering different scenarios with ground water impacts. Plus, the agency has met a number of times with various interested parties at their requests. IDEM has seriously considered the input received in developing the rule proposed for final adoption.

Summary of the Rule

The ground water quality standards are required by statute to include numeric and narrative criteria, a classification plan, and a method of determining where the standards must apply. The proposed rule language includes all of these elements. Agencies charged with the protection of ground water shall apply and implement the standards **through subsequent rulemakings**. The proposed rule includes narrative and numeric criteria for ground water in drinking water and other beneficial use water supply wells such as those used for industrial processes or agricultural irrigation. These criteria will protect water quality supplies in those wells upon the effective date of the rule. The interim ground water standards will be repealed by the new rule.

Main Advantages of the Rule

Final adoption of the ground water quality standards will:

- Immediately place protections in the form of numeric and narrative ground water standards in place for all drinking water and beneficial use wells in Indiana.
- Establish numeric and narrative criteria for state agencies to use to guide future activities in regulating activities that may affect the quality of the ground water.
- Include specific direction to the five state agencies to prevent and minimize any future contamination of ground water.
- Be consistent with the state's land contamination programs aimed at cleaning up contamination and assuring protection of public health from past contamination.
- Establish a statewide benchmark for measuring ground water quality in Indiana.
- Recognize the existence of certain conditions or practices that need to be addressed individually (for example, agricultural areas, coal mining, historically contaminated ground water, and ground water remediations).

- Not impose a new significant fiscal impact beyond existing rule and statute though subsequent rulemakings to implement the standards may have a fiscal impact.

Limitations of the Rule

The proposed ground water quality standards are limited and do not address all concerns of all persons participating in the development process. For example, the ground water quality standards rule:

- Is not effective immediately, except to protect drinking water and other beneficial use wells.
- Does not include specific implementation requirements for activities regulated by the five state agencies; implementation will be left for those agencies to accomplish with subsequent rulemakings.
- Does not dictate the approach to be taken by the five state agencies in preventing further ground water contamination; instead the rule allows each agency to develop its own approach to meet the requirement of eliminating or minimizing further contamination.
- Does not dictate changes to the state's land remediation policies.

Summary of Major Changes to the Rule

The above limitations are among some of the key issues remaining in the proposed ground water quality standards rule. Other language concerns exist, for example, the use of the term “eliminate or minimize” potential adverse impacts to the existing ground water quality. However, many other issues identified at and subsequent to preliminary adoption were addressed through changes in the rule language. Following is a summary of the significant changes made to the preliminarily adopted draft rule:

Prevention Language strengthened in section 2.

Section 2 was revised to clarify, in subsection (b), that agencies adopting rules to apply the GWQS will ensure appropriate, practicable water protection measures are used in the design and management of the entities they regulate. Appropriate and practicable measures will be determined in the subsequent rulemakings of the agencies adopting rules and may consist of preventative action levels, design standards, or other approaches that are feasible considering economic costs and environmental benefits. Specifically, the language was changed to say that an agency “shall” ensure that facilities, practices, and activities are designed and managed to eliminate or minimize potential adverse impacts to the existing ground water quality by applying prevention measures to the extent feasible. Thus, the application of appropriate, practicable prevention approaches is now a requirement of subsequent rulemakings to apply the standards. The previous rule version left the application of appropriate prevention measures optional by saying an agency “may” ensure rather than “shall” ensure.

Note: IDEM does not believe preventative action levels (PALs) are an appropriate or practicable regulatory tool for all the facilities, practices, and activities regulated to protect ground water. Therefore, IDEM does not believe it is appropriate to require in this rule that agencies, when adopting the standards in subsequent rulemakings, establish PALs. However, IDEM does believe it appropriate to require that other agencies ensure potential adverse impacts to ground water are eliminated or minimized when adopting the standards in subsequent rulemakings. The appropriate

level of minimization for a particular regulated facility, practice, or activity will be established in those subsequent rulemakings.

Applicability to Remediations clarified in section 2

Section 2 was revised, in subsection (d), to clarify which remediations are appropriate for application of the remediation objectives outlined in IC 13-25-5-8.5. The standards shall allow remediations conducted under 13-22 for RCRA/hazardous waste, 13-23 for UST/LUST, and 13-25-5 for VRP to be consistent with the remediation objectives outlined in IC 13-25-5-8.5. With this clarification in place, the words “as appropriate” were removed from this subsection.

Language to Clarify Applicability of IC 13-30 added in section 2

Section 2 was revised to include subsections (e) through (g) which establish narrative and numeric criteria that immediately apply to protect drinking water, agricultural, industrial, and other existing use water supply wells.

Subsection (h) was added to clarify that the application of the GWQS beyond the protection of drinking water, agricultural, industrial, and other existing use water supply wells does not occur upon the effective date of the rulemaking but is determined by subsequent, separate agency rulemakings.

Note: IDEM does not believe that establishing the USEPA maximum contaminant levels (MCLs) as the numeric criteria that must be met in a drinking water well allows degradation of a well to levels such that the water is unfit to drink. On the contrary, IDEM does believe that these enforceable criteria provide an incentive for people to protect the ground water in drinking water wells. Clearly ascertainable numeric criteria are needed because these criteria are enforceable

Definition of Preventative Action Level added in section 3.

Section 3 was revised to include a definition of “preventative action level” to ensure understanding of what is meant by the use of this term in this rule. When preventative action levels are applied by an agency in a subsequent rulemaking, they provide a trigger for further action to ensure that standards are met.

Applicability of Classification Plan Clarified in section 4.

Section 4 was revised to clarify that the classification plan does not apply until it is adopted in subsequent rules.

Naturally Limited Class changed to Limited Class in section 4.

Section 4, subsections (b) through (f), were revised to recognize that some of the ground water formerly designated as “naturally limited” (for example, affected by coal mining or agricultural activities) in the preliminarily adopted rule is limited due to the impact of human activity and should not be considered “naturally” limited. The title of “naturally limited” was changed to “limited” class ground water.

Coal Language for Limited Classification revised in section 4.

Section 4, subsection (d), was changed to clarify IDEM’s expectations for the reclassification of a former coal mine area when subsequent rulemakings adopt the classification plan outlined in the GWQS. While the classification plan must be adopted in subsequent rulemakings before it can be

utilized, IDEM believes it is appropriate to establish guidelines to be followed, particularly when dealing with formerly coal mined areas. These guidelines restrict reclassification to those areas mined prior to the effective date of state and federal coal mining laws and those that have fully complied with effective state and federal coal mining laws.

Note: IDEM believes the unique nature of coal mining's effects on ground water (in many cases, the act of mining essentially creates "new" areas of aquifer material where ground water then accumulates), necessitates the recognition of formerly coal mined areas as a separate class of ground water in the GWQS.

Language for Reclassification of Agricultural Root Zone added to section 4.

Subsection (e) was added to section 4 to allow ground water within agricultural root zones to be classified as limited ground water when subsequent rulemakings adopt the classification plan outlined in the GWQS.

Language to Classify as Impaired with Approved Institutional Control added to section 4.

Subsection (g) was added to allow ground water that has contaminant concentrations above the drinking water criteria and is addressed by an approved institutional control through a remediation program to be classified as impaired drinking water when subsequent rulemakings adopt the classification plan outlined in the GWQS.

Criteria for All Ground Water reevaluated in section 5

Subsection (2) of section 5 was deleted because the criteria for drinking water wells are included in section 2 of the rule.

Subsection (4) of section 5 was deleted because it is addressed by the criteria for meeting surface water quality standards at the ground water – surface water interface.

Criteria for Drinking Water Class Ground Water changed for consistency in section 6

Section 6, subsection (b) was deleted because the criteria for drinking water wells are included in section 2 of the rule.

Criteria for Coal Mine related Limited Class Ground Water clarified in section 7

Section 7, subsection (b) was changed to clarify that the disposal of coal combustion waste at a surface coal mine is not considered an activity associated with coal mining in this rule.

Criteria for Agricultural related Limited Class Ground Water added in section 7.

Subsection (c) was added to section 7 to define the numeric criteria that apply to limited class ground water within a crop root zone.

Option for Risk Based Criteria for Impaired Drinking Water Class Ground Water added in section 8.

Subdivision (4) was added to section 8 to allow the commissioner to apply appropriate risk based criteria to impaired drinking water class ground water.

Ground Water Management Zones clarified through modification of section 9

The subsections of section 9 were modified to emphasize that program and site specific ground water management zones established by an agency take precedence over the default ground water management zone. Note: The preliminarily adopted subsection (b) was deleted from section 9 because ground water management zones do not apply until adopted in subsequent rules.

Subsection (a) was changed to clarify that the narrative and numeric criteria established in sections 5 through 8 of the rule apply at and beyond the boundary of a ground water management zone.

Subsection (c) was changed to clarify that a ground water management zone is needed only for ground water contamination and assessments subject to the criteria of this rule and that expected future use of the site should be considered when establishing a ground water management zone for ground water contamination and assessments subject to the criteria of this rule.